

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS.

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JANUARY, 1924: WARM AND UNSETTLED. MAINLY RATHER WET.

General.—Mild, dull and rainy weather, associated with the passage of shallow secondaries, characterised the opening days of the month. On the morning of the 4th, pressure rose over the southern North Sea, and by the 5th a belt of high pressure extended from the Bay of Biscay across England to Sweden. Winds became light and indefinite over the south and south-east of England. Following a decided fall in temperature, thick fog occurred in many parts of the country, and at Ross-on-Wye on the 4th the fog persisted all day. Ground frosts were general, and at some stations the reading of the grass minimum thermometer was decidedly low. On the 8th a deep depression, centred off the west coast of Ireland, began to move south-eastwards and associated with it were easterly and south-easterly gales in many parts of the British Isles. Snow fell generally in this and the two following days, and in some places, including London (Hampstead), "snow lying" to a depth of between 5 and 6 inches was registered. This depression having filled up, a short period of mild unsettled weather between the 10th and 17th followed. Associated with the passage of a vigorous secondary across Ireland and the north of Scotland, southerly to south-westerly winds, strong to gale force, occurred locally in the west and south-west of the British Isles, accompanied by heavy rain. On the 17th, under the influence of an anticyclone over Scandinavia, winds were easterly over the eastern parts of the British Isles. At several stations in the Eastern and Midland counties temperature on this day did not rise above 32°F. Mild weather with much rain at times set in again after the 17th, and persisted until the 26th when the anticyclone to the south-west of the British Isles spread northwards. Apart from the extreme north and north-west, mainly fair conditions obtained over the British Isles up to the end of the month with occasional mist, fog or drizzle locally.

The general character of the month is illustrated by the following remarks taken from the observers' notes:—Coppdock.—A quiet still month with a good deal of fog; rainfall substantially in excess of the normal. Malvern.—Variable temperature during early part of month. Torquay.—Wet, cloudy and unsettled weather; temperatures above normal. Skegness.—An average January. Dry at the beginning of the month, wet in the middle, getting dry towards the end again. The rainfall for January 22nd, 20mm., is the greatest total for one day in any January since 1886. Fairly high mean air pressure. Arisaig (Inverness).—The only abnormal feature of this month was the way in which the very heavy westerly gale on the 12th, with tremendous squalls of snow, hail and rain moderated quite suddenly and was followed by a calm misty day. Arrochar (Argyll).—Weather very variable throughout the month. Season late. Great lack of sunshine. Dublin City.—An open month, but unpleasant by reason of clouds, dampness and frequent rainfall.

Pressure and Winds.—The mean pressure of the month was below normal save in the Shetlands. The deviation of monthly means of pressure at fixed hours from the normal ranged from +1.1mb. at Lerwick to -7.4mb. at Cahirciveen. The highest pressures of the month were experienced between the 26th and 28th and the lowest between the 8th and 10th. The highest and lowest pressures of the month, 1042mb. and 972mb., occurred at Cahirciveen on the 27th and 8th respectively. On the latter date the low pressure was associated with the passage of the deep depression of the 8th (Track H). The isobars of mean pressure continued irregular and trended roughly from south-west to north-east. With the exception of the depression of the 8th, the tracks of the main depressions lay between the Hebrides and Iceland. A feature of the month was the number of secondaries which traversed the country. Gales occurred in many parts of the country between the 8th and 14th, and in the North of Scotland between the 22nd and 26th and on the 30th. A gust of 86 m.p.h. was experienced at Lerwick on the 12th. Scilly recorded a gust of 79 m.p.h. on the 8th and Valencia, one of 70 m.p.h., also on the 8th.

Temperature.—The mean temperature of Districts 1-10 was 41°F. The mean temperature of all Districts was above normal. The largest excess, 2.4°F., was experienced in Ireland N. (mean temperature 43°F.). The week ending on the 12th was the coldest of the month, and the week ending on the 26th, the warmest. The lowest day-maxima occurred on the 9th and 17th, when at several stations, notably in the east and midland counties, temperature did not rise above 32°F. all day. At Leadhills the maximum reading on the 9th was as low as 25°F. and at Nairn and Leafield as low as 27°F. or 28°F. At several stations on the 10th, screen minima below 20°F. were obtained. In Great Britain the highest temperatures were in the neighbourhood of 50°F. and occurred on various dates. At most stations in south-east England they occurred on the 12th. The highest readings observed occurred at Dublin (Phoenix Park) on the 21st when a maximum of 59°F. was registered, and at Llandudno on the 26th and Gordon Castle on the 29th when maxima of 57°F. were registered. In Scotland the highest readings for the

month occurred widely on the 29th. Ground frosts occurred at Worksop on 23 occasions, at West Linton, Leamington Spa, and Hampstead on 21 occasions and at Leuchars on 20 occasions. Amongst the lowest temperatures were 7°F. at Eskdalemuir on the 9th and 8°F. at West Linton on the 10th.

The extreme temperatures for the month were:—(England and Wales) 57°F. at Llandudno on the 26th, 14°F. at Garforth on the 10th; (Scotland) 57°F. at Gordon Castle on the 29th, 6°F. at Wolflee on the 10th; (Ireland) 59°F. and 24°F. at Dublin (Phoenix Park) on the 14th.

Precipitation.—Precipitation was below normal in two large areas, viz., the north of Scotland, and the north-west of England. In Cumberland, precipitation amounted to about 75% of the normal. In the south-east of Ireland, in an area which embraced the counties of Wicklow, Wexford and Carlow, the rainfall was about twice the normal. Over the south-west of England and extending north-eastwards about as far as Buckinghamshire, precipitation was about one and three quarter times the normal. The general precipitation of the British Isles expressed as a percentage of the normal was 125; the values for the countries were:—England and Wales 128, Scotland 101, Ireland 148.

In Scotland precipitation was moderate during the first half of the month but from the 18th onwards there was rain on every day in the north-west, with heavy falls on 25th and 26th. Relatively to the normal, totals showed a moderate excess in Fifeshire and parts of Perthshire and Forfarshire and to the south of the Forth and Clyde but elsewhere, as a rule, a fairly well-defined shortage.

The largest total fall registered at stations given in this report was 253mm. at Newtownbarry (Wexford). Some of the largest daily falls were 68mm. at Leadhills, 50mm. at Eskdalemuir, both on the 13th, and 42mm. at Clongowes Wood and 39mm. at Newtownbarry, both on the 12th.

Owing to the heavy rain floods occurred in several parts of the country. In the upper reaches of the Thames much inconvenience was caused by the high floods. The rainfall in the Suir Valley was very heavy during the fortnight ending on the 19th. The flood at Clonmel rose to the level of the 1840 flood and at Carrick-on-Suir almost to the 1895 flood level.

Snow fell over the greater part of the country on the night of January 8th-9th and on the two days following, the fall in London being the heaviest experienced for many years. The high wind which accompanied the snow storm caused a considerable number of drifts. In north-east Yorkshire the snowfall is reported to have been the heaviest experienced this winter. On the night of the 17th-18th, snow to a depth of 4ins. fell at Glasgow.

The snowfall in the south was associated with the passage of the deep depression of the 8th which moved from the west of Ireland to France (Track H) and caused severe easterly gales over the British Isles. The snowfall on the 10th in many parts of the northern districts was associated with the passage of a secondary depression in a north-easterly direction, the centre of the main depression remaining stationary off our north-west coasts.

Thunderstorms were reported at a few places in the south on the 19th and in Scotland occurred sporadically on the 11th, 12th, 24th and 26th.

Sunshine.—The duration of sunshine was slightly in excess of the normal in all districts except Scotland W., England S.W. and Ireland. The largest mean daily excess occurred in England S.E. (+0.33 hours) and the largest deficiency in Ireland S. (-0.57 hours).

The week ending January 26th was generally speaking the sunniest and the week ending January 19th the dullest. At a number of stations on the 25th sunshine values of more than 7 hours were registered. Dull conditions prevailed generally in Scotland, the month's moderate amount of sunshine being largely accounted for by a few sunny days.

Fog.—At Southampton fog occurred on 29 days, and at Lincoln on 20 days. At several stations 10 or more days of fog occurred. On the 23rd between 12h and 14h it was exceptionally dark in London without appreciable fog; many street lamps were lighted.

Miscellaneous Phenomena.—Solar and lunar halos were again frequently observed. Parhelia were observed on four occasions at Oxford and once at Calshot on the 19th. An aurora was observed at Aberdeen, Wick and Gordon Castle (Elgin) on the 3rd, and at Wick and Malin Head on the 30th. A particularly brilliant auroral display occurred on the night of the 29th-30th and was visible over a large area in the North of Scotland. The observer at Aberdeen (King's College) reports:—"Aurora 18h-24h, moderate bright glow type, occasional streamers, green white, with deep red suffusion at times. 18h-20h irregular and patchy, later broad arch." The observer at Hereford reports that on January 26th a slight earthquake shock was felt soon after 18h. The Zodiacal Light was observed at Oxford on the 2nd, 3rd, 6th and 25th, at Ross-on-Wye on the 27th and at Wadhurst (Sussex) on the 3rd-6th, 25th and 27th.